

# **Costs, rewards and social reciprocity: teachers' motivations for networked learning**

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## **Abstract**

This paper discusses teachers' perceptions of learning networks and arguments for participating in these networks, viewed from a social exchange and symbolic interaction perspective. Although the use of learning networks to improve informal learning of teachers appears to be promising, teacher participation in informal networks is scarce. In this paper we try to find reasons for this scarcity by studying teachers' considerations for (non-) participation in learning networks. Central to this type of studies is the theme of reciprocity. Previous research approached reciprocity from a rational exchange perspective. We do an effort to extend this approach with elements from symbolic interactionism, aiming at an understanding of the relation between a) teachers' perceptions of learning networks, and b) considerations for participation in learning networks. Participation in learning networks does not only depend on a rational consideration of costs and rewards, but also on traditions and rituals because of belonging to a social order. We pursue our exploration, guided by the following research question: *What is the relation between teachers' perceptions of learning networks, and their considerations for (non-) participation in these networks?* We answer this question by means of data from structured interviews among 25 teachers in secondary education. The data show perceptions of learning networks as organised both inner-school and outside school, and mostly focused around specific content knowledge or themes. The considerations for (non-) participation range from costs, such as time and self-efficacy, to rewards such as useful content for lessons and contacts with others. In addition to these economic motives for participating in learning networks, we also found symbolic arguments for networking such as joy, sharing, mutual understanding and meaning giving resulting from the networking activities. The results led us to conclude that in addition to social exchange motives, symbolic aspects of communication and interaction play an important role in considerations for participation in (online) learning networks. The results of our exploration can be used to support the development of (informal) learning networks for teachers.

## **Keywords**

Networked learning, learning networks, teacher learning, professional development of teachers, qualitative research, exchange theory, symbolic interactionism.

## Teacher learning in networks

'Networked learning is about sharing, and to avoid reinventing the wheel'  
(Teacher active in online learning networks).

This paper discusses teachers' perceptions of learning networks and arguments for participating in these networks, viewed from a social exchange and symbolic interaction perspective. Learning networks are spaces for shared activities in which learning is situated. In these spaces participants connect ideas, share problems and insights in a constructive way, and connect with concepts with which they are already familiar, using new knowledge that is collaboratively constructed through their dialogues and social interactions (Wenger, Trayner, & De Laat, 2011). According to the respondents in our study "learning networks are based on trust", "networks are organized around shared theme's or interest", and "networks often start with face-to-face contact, and can then develop online". These rather tentative descriptions of learning networks are reflected in the definition of networked learning as learning that promotes collaborative or cooperative connections between learners and learning resources, often supported by ICT (Goodyear, Banks, Hodgson & McConnell, 2004).

Defining learning in networks brings up the question what precedes the development of a network or community. What are considerations or motives for active participation in learning networks? In looking for answers to these questions, this paper focuses on teachers. Teachers have a crucial role in implementing innovations in educational practice. Moreover, they are expected to continuously develop themselves, both in content knowledge and pedagogical knowledge. Nonetheless, research on teacher learning is scarce (Bakkenes, Vermunt, & Wubbels, 2010). Too often educational innovations have failed because the need for teacher learning was neglected, or teacher learning was organised around formal activities that show little result, such as courses or training (Guskey, 2002). Although the use of learning networks to improve informal learning of teachers appears to be promising (e.g. Lieberman & Pointer-Mace, 2010), teachers do not always fully utilize the possibilities for learning provided by their environment (Kwakman, 2003). In this paper we try to find reasons for this underutilization by investigating teachers' reasons for (non-) participation in learning networks. Previous research approached this topic from a rational exchange perspective, focusing on costs and rewards as motives for participation in learning networks. We make an effort to extend this approach with elements from symbolic interactionism (Mead, 1934) that emphasize social-normative aspects such as habits, rituals, traditions, or simply the joy of being part of a community. We do so by means of interviews among 25 secondary education teachers in the Netherlands. The aim of our study is to understand the relation between a) teachers' perceptions of learning networks, and b) considerations for participation in learning networks.

### Understanding learning networks

Discussing perceptions of learning networks is in line with existing literature that looks for descriptions and understanding of networks. The starting point in this line of literature is the descriptive approach to communities of practice (Wenger, 1998). This descriptive approach is also reflected in for instance the Community Indicators Framework (Galley, Conole, & Alevizou, 2012) that presents the social structure of online networks in four dimensions: practice, identity, cohesion, and creative capability. A similar framework is available for both

online and offline networks. This framework consists of the dimensions practice, domain and value creation, collective identity, and organisation (Vrieling, Van den Beemt, & De Laat, in press). Each of these four dimensions is constructed from several indicators. These indicators are measured as the extent to which the group shows specific attitudes and behaviour.

*Domain and value creation* refer to the shared domain that inspires the members to share, broaden or deepen their knowledge and skills within the community, and the value this creates for the members' practice. *Practice* refers to the extent to which the group exhibits social activities and the extent to which the group's knowledge is integrated in day-to-day activities. *Collective identity* measures the mutual engagement that binds the members together in a social entity, shown for instance by a shared identity, strong ties and the perception of group members as knowledge workers. *Organisation* finally refers to the extent to which the group members share interactional norms, the extent to which the group is self-organized based on hierarchical or equal relationships and the extent to which the group has a focus on local or global activities.

### **Exchange as a rational balance between costs and rewards**

Research on participation in (online) learning networks expresses the considerations for participation in terms of a balance between costs and rewards. Studies that try to quantify the costs-rewards balance mention fetching-bringing ratios as diverse as 22 : 1 or 40 : 1 (Tomsic & Suthers, 2006). A certain part of the literature tries to describe this question by looking at the amount of passive participants in a network, the so-called 'lurkers' (Dennen, 2008). Other authors search for a more qualitative approach, focused on the experienced quality and the psychological notion of reciprocity (cf. Aviv, 2005). By focusing on a balance between costs and rewards, these studies interpret reciprocity as exchange aimed at self-interest.

Motives for participation expressed as a rational consideration of costs and rewards, can be found in the social exchange theory (Homans, 1958). Situating the social exchange theory in the context of networked learning allows for an operationalization of the variables costs and rewards (Van Acker, et al, 2013). Costs in this context are built from the indicators 'self-efficacy' and time. Self-efficacy is related to a teacher's self-experienced skilfulness in for instance developing content that is of interest for the community. When teachers think of themselves as skilful and when they think that their content is of additional value to others, they will be more inclined to share this content. Self-efficacy in this context can be seen as a cost, because the lack of skills requires an investment in schooling. A second aspect of costs is the time investment, for instance for developing content or knowledge to be shared. Finally, it can be expected that technological costs, or more specifically the effort needed to apply technology, correlate negatively with contributing to the community (Van Acker, et al, 2013). In the context of networked learning, possible rewards in the social exchange theory can be operationalized as for instance altruism and reputation. Altruism refers to teachers' enjoyment in sharing content and knowledge with the community. Reputation is related to an increase in status as a result of contributing to the community. Research into the use of Open Education Resources (OER) in the Netherlands (Wikiwijs, see Van Buuren et al, 2011) shows that teachers who are passive participants, actually do have the intention to contribute to the network (78%). However, they feel inhibited by the perceived costs and lack of rewards.

Although Homans' theory is often explained as based on an economic-rational exchange, the basic idea actually is the non-material value of exchange, such as reputation, altruism, and

emotion. However, the assumption is exchange, which is reflected in the definition of associations as exchanges “of activity, tangible or intangible, and more or less rewarding or costly, between at least two persons” (Homans, 1958). The theory suggests that people do things for others with the expectation that there will be some type of reward for doing so. In the absence of rewards such behaviour will be enacted less often over time. The social exchange theory predicts that trust plays an important role in the decision to show certain behaviour (Van Acker, et al, 2013). Trust is related to reciprocity and trust in colleagues. Reciprocity means that teachers acknowledge the value of content shared by others and thus think they should share as well. Trust in colleagues is related to the chance of receiving acknowledgement from colleagues for sharing content. Notwithstanding this role of non-material exchange and trust, exchange theory is based on rational principles with the assumption that people engage in transactions when the rewards exceed the costs. This includes immaterial rewards and costs, such as respect and status. After all, exchange is interaction based on self-interest.

### **Exchange as social order**

The essential part missing from rational exchange theories is the social-normative aspect of social interaction. Theories such as symbolic interactionism (Mead, 1934) start from the assumption that people can act on the basis of moral and social motives, such as for instance identification with a community or group or rituals passed on during history. Central to this perspective is the feeling of community and mutual relations as a basis for (postponed) reciprocity. The economically oriented exchange theories, such as Homans's reduce social reciprocity mainly to enlightened self-interest (Pessers, 1999). On the other hand, interdisciplinary, sociological theories, such as symbolic interactionism, place reciprocity in a social-normative context. According to these theories, reciprocity is not only determined by economic self-interest, but also by traditions and habits, collective consciousness, rituals representing societal values and the need for meaning-giving to the community or society at large.

Mead's (1934) theory of 'symbolic interactions' evolves around three theoretical notions that represent an ascending degree of connectedness with a group or community. The development of reciprocity starts with '*Mind*', the process of understanding and being able to apply conventions within a community or network. Applying conventions is done by (in your mind) 'taking the role of others': thinking about how specific other persons in the community would respond to your actions. The next step represents a larger degree of connectedness with the community: The '*Self*' is the process of relating your actions to a generalized other, for instance teachers in general. The highest degree of connectedness is '*Society*': the process of understanding the organized and patterned interactions among individuals in a community or network, and of acting according to these interactions. Mind, Self and Society are thus based on meaning giving and shared norms and values. Actions are taken out of habit, because they are rituals expressing connectedness and a shared identity, or because of joy, mutual trust, loyalty or indebtedness. This kind of reasons forms the foundation of symbolic interactions and can be seen as intrinsic motivation resulting from the certainty of relations. When people perceive themselves as part of a social-normative order, actions are not scrutinized on a balance of costs and rewards.

In this paper we argue that in order to understand teachers' motives for (non-) participation in learning networks, we have to extend the perspective of reciprocity based on economic principles, with reciprocity based on membership of a community. Participation in learning networks does not only depend on the balance between costs and rewards, but also on symbolic interactions. We explore this argument guided by the following research question:

*What is the relation between teachers' perceptions of learning networks, and their considerations for (non-) participation in these networks?*

## **Methods**

The data for this paper were collected as part of an explorative study on teachers' intentions for networked learning. The data were collected with the purpose of an extensive exploration from different theoretical perspectives, in this case social exchange theory and symbolic interactionism.

## **Participants**

The study sample was conveniently sampled. We followed recent research (e.g. Colley & Volkan, 2004) in using teachers as our key informants, 'since they receive information from a wide variety of members in the organization and are therefore a very valuable source for evaluating the different variables of the organization' (Morales, et al, 2006). This resulted in a selection of 25 Dutch secondary education teachers to be interviewed. The respondents ranged from 25 to 62 year olds (36% female) and had had formal teacher training. The teachers were asked in advance to indicate whether they were engaged in a network and how they participated in this network. The respondents indicated to participate in a mixture of online and offline networks, organised both inner-school and outside school. During the interview it was asked what the teacher understood by participation in a network.

## **Materials**

The structured interviews consisted of three parts: background information, perceptions of networked learning, personal experience with networked learning, and future use of learning networks. Background information contained questions about age, experience as a teacher, subjects to be taught, educational level, and highest degree. Under 'Perceptions of networked learning' teachers were asked to define networked learning and to talk about how networked learning contributes to teachers' development, what investments and facilities are required, and how networked learning relates to quality of teaching and education. 'Personal experience' consisted of questions regarding motives for participation in learning networks, current networks, management support and required time, activities, skills, costs and rewards. 'Future use of learning networks' inquired teachers about their intended participation in learning networks in the next three months and the next year. The interview questions served as probes for the respondents to tell stories about their participation in learning networks. For the purpose of this paper we focused the analyses on the perception of networked learning and the experience with this type of professional development.

## **Procedure and analyses**

All interviews were conducted in-person, audio recorded, and lasted on average 60 minutes. The interviews were conducted at the respondents' school. The language was Dutch.

The data analysis consisted of 1) a within-case analysis to reach data reduction and 2) a cross-case analysis to search for patterns in the respondents' stories. During the within-case analysis, data of each respondent were analysed by means of 'close reading' in order to find indicators for perceptions of networked learning and for costs, rewards and symbolic interactions. This facilitated comparisons between teachers in the next phase. Matrices per teacher of related concepts as a means for data display (vertical analysis) were used. Finally, a comparative (horizontal) analysis of all respondents took place, which resulted in accounts to draw conclusions and verify the data with the theoretical concepts related to our research question. The technique of 'constant comparative analysis' (Glaser & Strauss, 1967) was used for both the vertical and the horizontal analysis in order to continuously compare preliminary interpretations with accounts of the other respondents and the theoretical framework. In the process of reading, interpreting and checking, we focused on interpreting considerations of teachers' use of learning networks.

## **Results**

Following our research question, we present the findings around three variables 1) perceptions of learning networks, 2) motives for participation perceived as exchange, 3) motives for participation perceived as related to a social order. We distinguish between active participants and non-participants in learning networks.

### **Perceptions of learning networks**

The teachers in this study described networked learning in general as 'being in contact with others on a structural basis'. One teacher mentioned that 'networked learning is a dynamic whole, organised around a specific theme, where people participate on a voluntary basis, in their own time'. This reflects the stories of most active networkers, which talked of networked learning as an informal activity. This contrasts with most non-participating respondents who perceived networked learning as something 'formal, which should be facilitated from formal professional learning budgets and time'. Some teachers perceived themselves as active participants in learning networks, because they download content, such as ideas for lessons, from online forums.

Many female non-participants in our sample perceived networking and networked learning mainly as online activities. The male non-participants stated that networked learning starts with offline meetings that can grow into a community, which eventually can be brought online. Non-participating teachers often thought of learning networks as consisting of colleagues within their school or their school-foundation. The active networkers had a much broader image of networked learning: the networks reach outside their school and deal with global issues that relate to the domain and community at large. Furthermore, active networkers described their networks as fluid rather than static with a stable group of contacts. In these fluid networks, the active networkers perceived themselves as the linking pin between contacts and sub-networks. This active approach is also expressed in the Dutch word 'netwerken', which they used as a verb (networking) rather than as a noun (networks).

## **Motives for participation: Costs and rewards**

All teachers in our study mentioned time as the first and most important cost for networked learning. Many respondents added that such time should be organised in a formal way, as part of their professional learning. The active participants mentioned time literally as a cost, although their stories reflected a different attitude, which is based on the enjoyment of networking and sharing knowledge itself. Furthermore they often reported to invest more time in networking than required.

Non-participants mostly saw two types of barriers for not taking part in networked learning activities: a fear of their contributions as not being useful to others (i.e. self-efficacy), and privacy issues. In line with our discussion of the social exchange theory, these barriers can be seen as costs that outbalance possible rewards of active participation in networks.

Rewards of active participation in learning networks ranged from content and ideas for lessons to an extension of existing knowledge. Non-participating teachers often thought of products as rewards, where active participants mention new contacts and sharing of knowledge as rewards.

Respondents often mentioned that networked learning is a timesaving activity, especially when examples of lessons are shared in the community. Some stated that this is in a way a paradox with time being perceived as the main cost for participation in networks.

## **Motives for participation: Belonging to a social order**

The foundations of symbolic interactionism, such as mutual trust, shared identity, loyalty and indebtedness, are reflected in the stories of most of the active participants. The networking teachers spoke of sharing, helping each other, collective and personal growth, inspiration and recognition. These respondents perceived the learning network as nearby, close to their own identity and practice. Their stories reflect that learning means networking, working means 'discovering new things, learning', and for the future this means 'doing all these things by meeting new people and sharing ideas and knowledge' (see also Diepstraten & Van den Beemt, 2013). The networking teachers feel part of a teacher community and identify themselves with a certain community, which makes networking self-evident to them. By result, self-interest is not their first concern.

Non-participating teachers often recognized these symbolic benefits, as is reflected in expressions such as 'avoiding to rust up, keep moving', 'meeting likeminded people', 'sharing knowledge'. However, they interpret symbolic benefits from a rational exchange perspective; they pointed at the absence of a social order and the need to create one 'before participating', instead of talking as a self-evident member of a community. In doing so, these teachers reflect also notions of symbolic interactionism: self-evident reciprocity because of belonging to a social normative order presupposes a sense of community

## **Conclusion: Relations between perceptions and motives**

In order to answer our research question, we have to derive from the results the relation between teachers' perceptions of learning networks, and their considerations for (non-)

participation in these networks. The results showed differences between active participants in learning networks, and non-participants for both images and considerations.

Both the actively networking teachers and the non-participants have clear perceptions of learning networks. However, the non-participants see barriers for not engaging in these networks. This is often related to an expected immediate return on investment, such as finding useful content to be used in class. In contrast with active participants, non-participating teachers do not see the networking itself as a reward. An interesting fact is that some teachers perceive themselves as active participants in learning networks, because they download content, such as ideas for lessons, from online forums. However, in line with existing research they would be labelled as passive participants and 'lurkers' (Nonneke & Preece, 1999). The active networkers have a much broader image of networked learning compared to non-participants. Active networkers speak of networks that reach outside their school and deal with global issues, which relates to the dimensions of organization and domain and value from the learning network framework (Vrieling, Van den Beemt, De Laat, under review). This reference of teachers to the social structure reflects a deep understanding of learning networks.

The relation between perceptions and motives related to networked learning can be described by means of four archetypes of teachers. Although the selection method and the number of respondents do not allow a generalisation of the results to the population at large, these archetypes may resonate with the experiences of teachers in similar circumstances and be enlightening for directors who seek to understand the professional learning practices of teachers.

1. The archetype of the active participating teacher perceives learning networks as reaching beyond the school, with a specific theme or content focus, discussing global issues. This type of teacher is a motivated networker, who is no longer focused on exchange, and instead relates his identity to the community. The networker values the contacts, rituals, norms and self-evidence in the community. Time is perceived as both cost and reward ('sharing saves time'), however time, as a cost will never outbalance the enjoyment and development of networking. This type of networker often has invested much time in building networks and networking skills. Networking is almost synonymous with orientations on learning, work and future.
2. Active participants, who perceive networks as local and being organized around the colleagues in their own section, think networking as part of their job. They have enough trust in their colleagues to see time and self-efficacy no longer as barriers for participation in the network. This type of teachers resemble the first archetype in thinking of learning and working as self-evident networking with colleagues, and networking as a self-evident part of belonging to a community of colleagues.
3. The non-participating teacher is focused on immediate returns of the network, such as content for lessons. For this type of teacher, the rewards will never outbalance the costs. This type of teacher sees time as a cost that is not facilitated for by others (e.g. the school-management).
4. Another type of non-participating teacher is inclined to share with the (outside school) network knowledge and products. However s/he refrains from doing so because of feelings of insecurity or issues with privacy of online networks. Both types of non-participating teachers lack a feeling of being connected to the community and of postponed reciprocity. Thinking of



outside school networks, this type of teachers become rational and doubt the value of possible contributions.

What does our theoretical approach add to investigating (non-)participation in learning networks? First, we consider the four dimensions of learning networks: practice, domain and value, collective identity and organisation. The dimensions of practice and domain are reflected in the reports when teachers identify themselves with colleagues in shared content areas, which also imply a certain collective identity. However, it is only in the reports of the active networkers that practice is presented as shared interactional repertoire. In sociological terms, this indicates a lack of community feeling among the non-networking teachers. The four dimensions of network structure can thus be seen as the need for a social-normative order, and the extent to which people feel that they are part of this order.

The identity of active networkers, conceptualised in terms of orientations on learning, work and future, appears to be synonymous with self-evident communication with others and the feeling of belonging to a community. The self-evident participation of teachers in learning networks goes together with a motivation to learn and an absence of rational considerations of costs and rewards. Active networkers express the passion for their profession or knowledge domain by talking to others about that domain in order to learn. They express a certain ownership and agency related to their work and careers. They thus experienced freedom (often facilitated or stimulated by school management) enforces agency, which in turn adds to fulfilment in their profession (e.g. Ketelaar, 2012).

For everyday practice this implies that in order to motivate teachers for networked learning, several points have to be reviewed: management support and the organization of 'formal' meetings to 'sponsor' the non-participating teachers (see also Büchel & Raub, 2002); the perception of communities both inside and outside school; the connection of a teacher's identity with a community; and the orientations on work, learning and future as being part of that community and as self-evident communication with others. It is only when people feel part of a social normative order, networking is self-evident and no longer related to rational considerations of costs and rewards only. It is in such a situation that people become aware of the sources and the value of that community, which simultaneously increases feelings of agency of these teachers. As long as teachers talk about networked learning in terms of a balance between costs and rewards, there is a need to work on their self-image of being part of a community, and on how their learning, work and future in this community becomes meaningful through interactions with others.

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